



*John*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/567,426  
Applicant : Werner LUBITZ  
Filed : May 16, 2006  
TC/A.U. : 1645  
Examiner :



Docket No. : 2923-746  
Customer No.: 6449  
Confirmation No.: 8425

**SUBMISSION OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

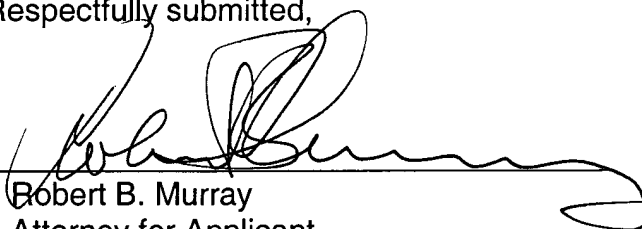
Dear Sir:

Submitted herewith is a copy of the translation of the International Preliminary Report on Patentability.

In the event that any fees are due with this paper, please charge our Deposit Account No. 02-2135.

Respectfully submitted,

By



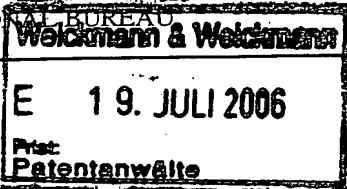
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RBM/cb

**PCT**

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY  
(CHAPTER I OR CHAPTER II  
OF THE PATENT COOPERATION TREATY)  
(PCT Rules 44bis.3(c) and 72.2)

From the INTERNATIONAL BUREAU



To:

WEICKMANN & WEICKMANN  
Postfach 860 820  
81635 München  
ALLEMAGNE

Date of mailing (day/month/year)  
13 July 2006 (13.07.2006)

Applicant's or agent's file reference  
26130P WO

International application No.  
PCT/EP2004/008790

**IMPORTANT NOTIFICATION**

International filing date (day/month/year)  
05 August 2004 (05.08.2004)

Applicant

LUBITZ, Werner

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

**2. Transmittal of the copy of the translation to the designated or elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Yolaine Cussac

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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

|  |  |  |
|--|--|--|
| Applicant's or agent's file reference<br>26130P WO   | <b>FOR FURTHER ACTION</b>  | See item 4 below   |
| International application No.<br>PCT/EP2004/008790   | International filing date ( <i>day/month/year</i> )<br>05 August 2004 (05.08.2004) | Priority date ( <i>day/month/year</i> )<br>05 August 2003 (05.08.2003) |
| International Patent Classification (8th edition unless older edition indicated)<br>See relevant information in Form PCT/ISA/237 |  |  |
| Applicant<br>LUBITZ, Werner  |  |  |

|                                     |   |   |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
|-------------------------------------|---|---|-----------|---------------------|--------------------------|------------|----------|-------------------------------------|-------------|--|--------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|--------------------------|-------------|--|--------------------------|--------------|---|
| 1.                                  | This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).   |   |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| 2.                                  | This REPORT consists of a total of 6 sheets, including this cover sheet.<br><br>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.   |   |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| 3.                                  | <p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 80%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> | <input checked="" type="checkbox"/>   | Box No. I | Basis of the report | <input type="checkbox"/> | Box No. II | Priority | <input checked="" type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input type="checkbox"/> | Box No. VII | Certain defects in the international application | <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/> | Box No. I   | Basis of the report   |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>            | Box No. II  | Priority  |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input checked="" type="checkbox"/> | Box No. III   | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>            | Box No. IV  | Lack of unity of invention  |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input checked="" type="checkbox"/> | Box No. V   | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>            | Box No. VI  | Certain documents cited   |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>            | Box No. VII   | Certain defects in the international application  |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>            | Box No. VIII  | Certain observations on the international application   |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| 4.                                  | The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).  |   |           |                     |                          |            |          |                                     |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |

|   |   |  |                    |                |  |                       |  |
|---|---|--|--------------------|----------------|--|-----------------------|--|
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland<br><br>Facsimile No. +41 22 338 82 70 | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Date of issuance of this report<br/>03 July 2006 (03.07.2006)</td> <td style="width: 50%;">Authorized officer</td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 10px;">Yolaine Cussac</td> </tr> <tr> <td colspan="2">e-mail: pt11@wipo.int</td> </tr> </table> | Date of issuance of this report<br>03 July 2006 (03.07.2006) | Authorized officer | Yolaine Cussac |  | e-mail: pt11@wipo.int |  |
| Date of issuance of this report<br>03 July 2006 (03.07.2006)  | Authorized officer  |  |                    |                |  |                       |  |
| Yolaine Cussac  |   |  |                    |                |  |                       |  |
| e-mail: pt11@wipo.int   |   |  |                    |                |  |                       |  |

# PATENT COOPERATION TREATY

Translation

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference

**26130P WO**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.

**PCT/EP2004/008790**

International filing date (day/month/year)

**05.08.2004**

Priority date (day/month/year)

**05.08.2003**

International Patent Classification (IPC) or both national classification and IPC

Applicant

**LUBITZ, Werner**

1. This opinion contains indications relating to the following items:

- |                                     |              |  |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion   |
| <input type="checkbox"/>            | Box No. II   | Priority   |
| <input checked="" type="checkbox"/> | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention   |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited  |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application   |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application  |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/IEP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/008790

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/008790

Box No. III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application

☒ claims Nos. 17

because:

☒ the said international application, or the said claims Nos. 17  
relate to the following subject matter which does not require an international preliminary examination (*specify*):

**See supplemental sheet**

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. \_\_\_\_\_  
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported  
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. \_\_\_\_\_

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.

☐ See Supplemental Box for further details.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/EP2004/008790

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims 1-19

YES

Claims \_\_\_\_\_

NO

Inventive step (IS)

Claims 1-19

YES

Claims \_\_\_\_\_

NO

Industrial applicability (IA)

Claims 1-16, 18, 19

YES

Claims \_\_\_\_\_

NO

2. Citations and explanations:

Reference is made to the following documents:

D1: US2003/0003511

D2: DE19909770

D3: US2003/0119057

Document D1 is considered the closest prior art over the subject matter of claims 1-19. It discloses (the references between parentheses relate to this document): sealing bacterial ghosts using vesicles. The method claimed according to claim 1 therefore differs from the known method(s) by using binding pairs showing bioaffinity on the surface of the bacterial ghosts and the sealing vesicle. The subject matter of claim 1 and of dependent claims 2-13, the product claims for the sealed bacterial ghosts (claims 14-16) and the claims to use of the ghosts in medicine, agriculture or biotechnology (claims 17-19) is therefore novel (PCT Article 33(2)).

The problem addressed by the present invention can therefore be considered that of improving the effectiveness of sealing bacterial ghosts. The solution proposed to this problem in claim 1 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons:

By charging the still-open ghost with a partner of a binding pair showing bioaffinity and charging the carrier material used for the sealing with the other partner of the binding pair, a preferred addition of the carrier material used for the sealing to the ghosts occurs and thus faster and better sealing of the ghost opening. Such binding pairs showing bioaffinity have already been used in connection with bacterial ghosts, but not in order to seal them, but to achieve retention of the active compound to be packaged into the

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/008790

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

ghost in the open bacterial ghost, or in the case of erythrocyte  
ghosts, for targeting (see also D1 and D3). These two teachings do  
not render obvious a method as in the present application.